

**FINDING OF NO SIGNIFICANT IMPACT**

for

**Rumen Protected Amino Acids (Copoly VP/ST) for Use in  
Feed for Dairy Cattle and Replacement Dairy Heifers**

**Food Additive Petition 2231**

**Rhone-Poulenc  
Atlanta, GA**

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The Center for Veterinary Medicine has carefully considered the potential environmental impact of this action and has concluded that this action will not have a significant effect on the quality of the human environment and that an environmental impact statement therefore will not be prepared.

Rhone-Poulenc Animal Nutrition N.A., provided an environmental assessment (EA) dated May 1994 and supporting studies for the use of rumen protected amino acids (RPAA) that contain Poly(2-vinylpyridine-co-styrene) i.e., Copoly VP/ST for use in feed for dairy cattle and replacement dairy heifers. The polymer component of the product (Copoly VP/ST) will be produced and purified at the firm's facility at Commentry, France. The finished product will be produced at Montlucon, France. Copoly VP/ST allows for the efficient uptake of the amino acids methionine and lysine. The polymer permits the transport of the amino acids through the rumen into the abomasum where the polymer loses its integrity releasing the nutrients for absorption.

The May 1994 EA estimates the amount of Copoly VP/ST expected to enter the environment as the result of feeding RPAA to dairy cattle. The EA estimate is based on the assumption that typical dosages range between 25-10 g RPAA/head/day (though actual dosage may vary between 5 - 50 g RPAA/head/day) will be fed to approximately 14.7 million head of cattle for 200-365 days.

Copoly VP/ST is expected to enter the soil environment, via manure from treated animals, and be found at a concentration of 1.06 ppm. Copoly VP/ST was found to be stable in the gastrointestinal tract of rats, was not adsorbed, and eliminated in the feces unchanged. Copoly VP/ST is expected to be strongly adsorbed by soil and it is expected to have a low mobility through soil. Therefore, it is not expected to move to surface or groundwater due to agricultural runoff in significant quantities.

Copoly VP/ST has a high molecular weight (i.e., between 100,000 - 500,000), low aqueous solubility (88 -185 ppb), and a lack of absorption in rats. Copoly VP/ST is not expected to bioaccumulate in plants or terrestrial organisms. The EA states that no more than trace quantities of Copoly VP/ST are likely to enter the aquatic environment and no subsequent bioconcentration is expected to occur there.

The final product (RPAA) will contain less than 6.0 ppb each of the Copoly VP/ST monomers styrene and 2-vinylpyridine. The EA demonstrates that the 1.31 lb./year of each of the monomers are expected to enter the environment each year and will result in soil concentrations of 0.21 ppt and air point source concentrations of 60 ppt. Therefore, these two monomers are not expected to have a significant effect on the environment.

The May 1994 EA is adequate to conclude that this action is not expected to have a significant impact on the human environment.

3/24/95

Date

Roger A. Jones

Preparer, Environmental Sciences Staff, HFV-152

                      
Date

William Q. Gentry

Primary Action Officer, HFV-226

3/24/95

Date

Charles E. Embrey

Chief, Environmental Sciences Staff, HFV-152

Attachment: Environmental Assessment dated May 1994